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EXAMINER

TANG, KUO LIANG J

ART UNIT	PAPER NUMBER
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2122

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/855,386

Applicant(s)

SPRING, MAXIMILIAN J.

Examiner

Kuo-Liang J Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/29/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office Action is in response to the amendment filed on 9/29/2004.

The priority date for this application is 05/14/2001.

Claims 1-29 are pending and have been examined.

Response to Arguments

2. Applicant's arguments with respect to claims 1-20 have been considered but they are not persuasive.

Claims 1-4, 6-13 and 18-29 remain rejected under 35 U.S.C. 102(e) as being anticipated by Chen, US Patent No. 6,567,380.

Claims 5, 14 and 16-17 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Rekhter et al., "Network Networking Group, Request for comments(RFC): 1771", .

Claim 15 remains rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Rekhter, further in view of Mueller et al. US Patent No. 6,188,659.

In the remarks, the applicant argues that:

- (I) As for independent claim 1, the Applicant primarily argues that
 - (a) the Office Action does not teach the creation and storage of information which describes an interface (REMARK, page 4, line 1).

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- (b) Chen does not teach describing an interface at a plurality of times with a corresponding plurality of instances of a data structure. (REMARK, page 4, lines 4-5).
 - (c) Chen does not teach automatically developing a second version number for a computer program module, nor does Chen teach that the neighbor version number is associated in any way with a plurality of instances of a data structures and mapping (REMARK, page 4, lines 21-23).
- (II) As per Claim 8, the Applicant primarily argues that Chen does not teach expressly nor inherently teach the creation, storage or retrieval of data which describes an interface at corresponding plurality of times and corresponding to plurality of version numbers for a computer program module (REMARKS page 5, lines 16-19).
- (III) As per Claim 25, the Applicant primarily argues that the table version number does not correlate to a version number for a computer program module. The routing table does not correspond to a computer program module which interacts with other modules through an interface. (REMARKS page 5, lines 12-16).

Examiner's response:

- (I) The examiner disagrees with Applicant's assertion. In fact, Chen does teaches
- (a) interface (E.g. see FIG. 3, 310A-C, Network Interface and associated text).
 - (b) plurality of instances (E.g. see FIG. 8, address field 804 and associated text) of a data structure (E.g. see FIG. 5, message 500 and associated text)

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- (c) a second version number (E.g. see FIG. 8, neighbor version number 806 and associated text) for a computer program module.

(II) The examiner disagrees with Applicant's assertion. In fact, Chen does teaches the creation, storage or retrieval of data (E.g. see col. 2:39-43) which describes an interface at corresponding plurality of times and corresponding to plurality of version numbers for a computer program module (E.g. see FIG. 7, routing table 700, entry version number field 716, table version number 730 and associated text).

(III) The examiner disagrees with Applicant's assertion. In fact, Chen does teaches "obtaining a second version number for the second module (E.g. see FIG. 8, neighbor version number 806 and associated text), the second version number set when the second module is developed based on a mapping between a plurality of instances of a data structure describing the interface (E.g. see FIG. 3, 310A-C, Network Interface and associated text) at a corresponding plurality of times and a corresponding plurality of version numbers for the first module;" (E.g. see col. 6:50 to col.7:30)

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-4, 6-13 and 18-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen, US Patent No. 6,567,380.

As Per Claim 1, Chen teaches that a technique allows selective generation of routing update messages by a router for its neighboring peer routers of a computer network. When an entry version number of a route is incremented, the reason (i.e., "what has changed") for the change in the best path of the route is identified and recorded. (E.g. see Abstract and associated text). In that Chen discloses the method that covering a method of maintaining version compatibility between a first computer program module and one or more interacting computer program modules that interact with the first module through an interface, wherein the modules are stored in computer storage, the method comprising the computer-implemented steps of:

“creating and storing first information (E.g. see FIG. 1 and FIG. 5 network layer reachability information field 508 and associated text) describing the interface at a plurality of times with a corresponding plurality of instances of a data structure (E.g. see FIG. 5, message 500 and associated text);”

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“creating and storing a mapping that associates the plurality of instances with a corresponding plurality of version numbers (E.g. see FIG. 7, entry version number field 716, table version number 730 and associated text) for the first module (E.g. see FIG. 7, routing table 700 and associated text);”

“automatically developing a second version number for a second module (E.g. see FIG. 8, neighbor version number 806 and associated text) of the one or more interacting modules based on the plurality of instances of the data structure and the mapping;”

“determining compatibility of the modules based on a first version number for the first module (E.g. see FIG. 7, table version number 730 and associated text) and the second version number for the second module (E.g. see FIG. 8, neighbor version number 806 and associated text).” (E.g. see col. 6:50 to col.7:30).

As Per claim 2, the rejection of claim 1 is incorporated and further Chen teaches wherein the step of automatically developing comprises:

“describing a subset of the interface (E.g. see FIG. 3, network interface 310_{A-C} and associated text), which subset is employed by the second module;” (E.g. see FIG. 8, neighbor table 800 and associated text);

“determining of the plurality of instances (E.g. see FIG. 8, address field 804 and associated text) at least one instance including data describing the subset of the interface;” and

“assigning the second version number for the second module (E.g. see FIG. 8, neighbor version number 806 and associated text) based on the mapping and the at least one instance.”

As Per claim 3, the rejection of claim 2 is incorporated and further Chen teaches:

“wherein said step of assigning the second version number comprises assigning as the second version number a particular value of the plurality of version numbers for the first module, the particular value associated with a particular instance of the at least one instance, the particular instance corresponding to an earliest time of one or more times corresponding to the at least one instance.” (E.g. see col. 6:50 to col.7:30).

As Per claim 4, the rejection of claim 1 is incorporated and further Chen teaches:

“wherein the plurality of version numbers for the first module corresponding to the plurality of instances vary in one direction with time of the plurality of times corresponding to the plurality of instances.” (E.g. see col. 6:24-33).

As Per claim 6, the rejection of claim 1 is incorporated and further Chen teaches:

“each of the interacting computer program modules include instructions causing one or more processors to obtain at least one of a property of a corresponding networking device type of a plurality of networking devices types and an action performed by the corresponding networking device type;” (E.g. see FIG. 5 message 500 and associated text)

“the first computer program module includes instructions causing one or more processors (E.g. see FIG. 3 Route Processor 302 and associated text), based on interacting with a particular interacting computer program module (E.g. see FIG. 3 Update Message 500 and associated text), to perform at least one of communicating with

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a first device of the corresponding networking device type on a network of networking devices including the first device (E.g. see FIG. 3, Interdomain Router 300 and associated text), and presenting properties of the first device to a network manager for the network, and displaying connections (E.g. see FIG. 3 Neighbor Table 800 and associated text) among the networking devices of the network to the network manager;” (E.g. see FIG. 1 and associated text)” and

“the plurality of networking devices types include one or more models of ... a router,” (E.g. see FIG. 1-3 and associated text)

As Per claim 7, the rejection of claim 1 is incorporated and further Chen teaches:

“wherein the second version number is developed when the second module is developed; and compatibility is determined at a later time.” (E.g. see col. 6:50 to col.7:30).

As Per claim 8, Chen teaches a method of maintaining version compatibility between a first module and one or more interacting modules that interact with the first module through an interface, the method comprising the steps of:

“retrieving data (E.g. see col. 2:39-43) from a stored mapping between a plurality of instances of a data structure describing the interface at a corresponding plurality of times and a corresponding plurality of version numbers for the first module (E.g. see FIG. 7, routing table 700, entry version number field 716, table version number 730 and associated text);”

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“automatically developing a second version number for a second module of the one or more interacting modules based on the mapping (E.g. see FIG. 8, neighbor version number 806 and associated text);”

“determining compatibility based on a first version number for the first module (E.g. see FIG. 7, table version number 730 and associated text) and the second version number for the second module. (E.g. see FIG. 8, neighbor version number 806 and associated text).” (E.g. see col. 6:50 to col.7:30).

As per Claims 9-11 and 18, the rejection of claim 8 are incorporated and are rejected under the same reason set forth in connection of the rejection of claims 2-4 and 7 respectfully.

As Per claim 19, the rejection of claim 18 is incorporated and further Chen teaches:

“wherein compatibility is determined when the second module is installed for use with the first module.” (E.g. see col. 6:50 to col.7:30).

As Per claim 20, the rejection of claim 18 is incorporated and further Chen teaches:

“wherein compatibility is determined when the second module is invoked for execution by the first module.” (E.g. see col. 6:50 to col.7:30).

As Per claim 22, the rejection of claim 8 is incorporated and further Chen teaches:

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“wherein the first module comprises instructions for causing one or more processors to manage a plurality of networking devices in response to data indicating input by a user.” (E.g. see FIG. 1-3 and associated text).

As Per claim 12, the rejection of claim 8 is incorporated and further Chen teaches:

“wherein a first instance of the data structure comprises data indicating a routine name and a routine type of a routine of the first module at a first time.” (E.g. see FIG. 7, routing table 700 and associated text).

As Per claim 13, the rejection of claim 12 is incorporated and further Chen teaches:

“wherein the first data further indicates a parameter type for the routine.” (E.g. see FIG. 7, mask/length field 714 and associated text).

As Per claim 21, the rejection of claim 8 is incorporated and further Chen teaches:

“wherein each module of the first module and the one or more interacting modules comprises instructions for causing one or more processors to perform one or more tasks.” (E.g. see col. 6:50 to col.7:30).

As Per claim 23, the rejection of claim 8 is incorporated and further Chen teaches:

“wherein each interacting module of the one or more interacting modules comprises instructions for causing one or more processors to provide device-specific

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information for one of a plurality of networking devices.” (E.g. see FIG. 1-3 and associated text).

As per Claim 24, the rejection of claim 21 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 6.

As per Claim 25, Chen teaches a method of determining version compatibility between a first module and a second module of one or more interacting modules that interact with the first module through an interface, the method comprising the steps of:

“obtaining a first version number for the first module;” (E.g. see FIG. 7, table version number 730 and associated text)

“obtaining a second version number for the second module (E.g. see FIG. 8, neighbor version number 806 and associated text), the second version number set when the second module is developed based on a mapping between a plurality of instances of a data structure describing the interface (E.g. see FIG. 3, 310A-C, Network Interface and associated text) at a corresponding plurality of times and a corresponding plurality of version numbers for the first module;” (E.g. see col. 6:50 to col.7:30) and

“determining whether the modules are compatible based on the first version number and the second version number.” (E.g. see col. 6:50 to col.7:30).

As per Claim 26, the rejection of claim 25 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 6.

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As Per Claim 27, is the computer-readable medium claim corresponding to the method claim 8 and is rejected under the same reason set forth in connection of the rejection of claim 8.

As Per Claim 28, is the system claim corresponding to the method claim 8 and is rejected under the same reason set forth in connection of the rejection of claim 8.

As Per Claim 29, is the system claim corresponding to the method claim 8 and is rejected under the same reason set forth in connection of the rejection of claim 8.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 5, 14 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Rekhter et al., "Network Networking Group, Request for comments(RFC): 1771", <http://www.faqs.org/ftp/rfc/pdf/rfc1771.txt.pdf>, March 1995 (hereinafter Rekhter).

As Per Claim 5, the rejection of claim 4 is incorporated and further Chen does not explicitly disclose indicating signatures of a plurality of routines of the interface at a first

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time. However, Rekhter in an analogous art teaches “wherein said step of describing the interface includes generating and storing in a first instance of the data structure data indicating signatures of a plurality of routines of the interface at a first time, wherein a signature of each routine includes a name of the routine and a type of the routine and parameter types for all parameters of the routine”. (E.g. see page 8, section 4.2 for OPEN Message Format). Therefore, it would have been obvious to incorporate the teaching of Rekhter into the teaching of Chen to indicate signature of a routine. The modification would have been obvious because one of ordinary skill in the art would have been motivated to use the RFC-1771 as a standard protocol to implement the BGP-4 protocol product to be able exchange information with other vender’s products.

As per Claim 14, the rejection of claim 8 is incorporated and is rejected under the same reason set forth in connection of the rejection of claim 5.

As Per claim 16, the rejection of claim 14 is incorporated and further Chen teaches:

“wherein the plurality of routines comprises all the routines of the interface.”
(E.g. see FIG. 3, memory 304 and associated text).

As Per claim 17, the rejection of claim 14 is incorporated and further the combination teaching of Chen and Rekhter teaches:

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“wherein the plurality of routines comprises all the routines of the interface except routines not implemented in the first module.” (E.g. see Rekhter, page 10, Authentication Information (optional)).

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen in view of Rekhter, further in view of Mueller et al. US Patent No. 6,188,659 (hereinafter Mueller).

As Per claim 15, the rejection of claim 14 is incorporated and further the combination teaching of Chen and Rekhter does not explicitly disclose hashed values. However, Mueller in an analogous art teaches “wherein the data indicating signatures of the plurality of routines of the interface at a first time comprises hashed values, each hashed value uniquely indicating a signature of each routine of the interface”. (E.g. see FIG. 1-2 and associated text, e.g. see col. 4:13-44). Therefore, it would have been obvious to incorporate the teaching of Mueller into the combination teaching of Chen and Rekhter to use hashed value to uniquely indicate a signature of each routine of the interface. The modification would have been obvious because one of ordinary skill in the art would have been motivated to create the unique catalog code using digital signature algorithm recorded on the disc to verify that the CD is not a copy.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Correspondence Information

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuo-Liang J Tang whose telephone number is (571) 272-3705. The examiner can normally be reached on 8:30AM - 7:00PM (Monday – Thursday).

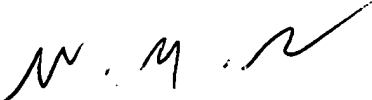
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Dam can be reached on (571) 272-3695. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Huo-Liang J. Tang

Software Engineer Patent Examiner


WEI Y. ZHEN
PRIMARY EXAMINER